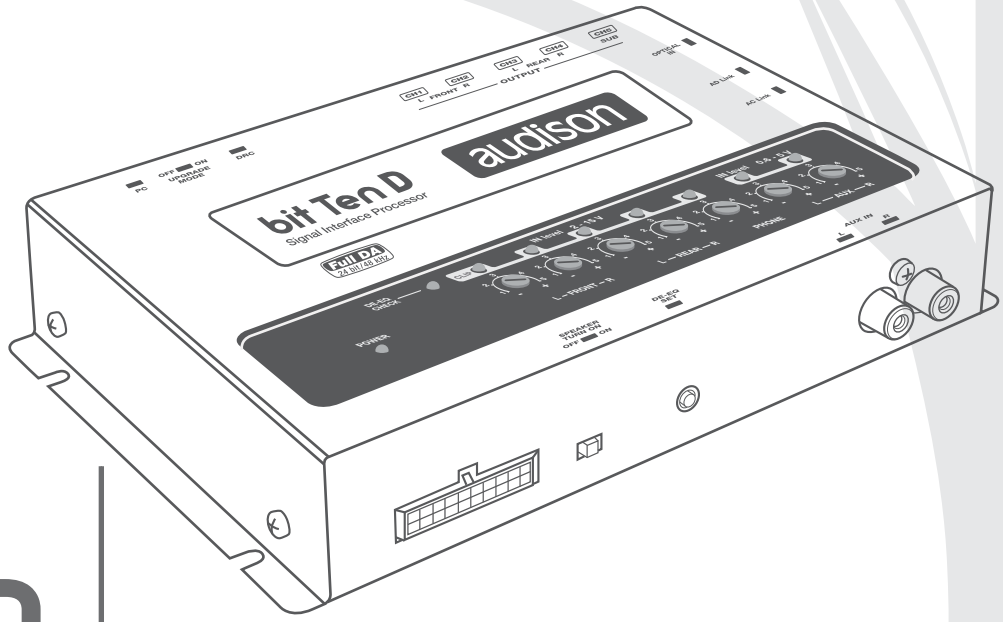
ideato,
progettato,
costruito
in Italia



bit Ten
bit Ten D

Signal Interface Processor

Press information

Elettromedia - April 2011

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www.audison.eu

bit Ten

Signal Interface Processor

Press information

Elettromedia - April 2011

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Visit www.audison.eu in order to find more information.

bit Ten

Signal Interface Processor

Connect, Customize, Control

How many times have we met the limits of OEM or after market integration, expandability or the overall sound quality of our mobile audio system upgrades? **Audison bit** is the solution: multi-function digital processors capable of interfacing with any analog and/or digital source, transforming ordinary “audio” into a high-performance integrated system.
In 2009 Audison introduces **bit one**, the first Signal Interface Processor conceived and built following the Audison philosophy: to satisfy a genuine passion for Sound, even with based on an OEM source.
Quickly, the bit one became a world-wide reference amongst audio processors. The experience that our team acquired allowed us to expand our family of processors, making available the possibility of realizing higher performance systems to a wider audience. **bit Ten** originates directly from its predecessor, the bit one for signal management, basic functions and PC software. The **bit Ten D** version can also manage a digital input signal from the head unit, outputting a digital signal to an amplifier(s) featuring AD Link connection.
All **bit** processors feature a powerful DSP (Digital Signal Processor) managed by a simple and intuitive computer software, which ensures a wide array of adjustments to improve the signal through each phase of its path; from input to output.
A revolutionary technology; making your dream for acoustic perfection in your vehicle a reality!

bit one

Signal Interface Processor

« A fantastic piece of technology »
(Performance Auto & Sound, Canada)

« Il fuoriclasse »
(ACS, Italy)

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bit Ten

Signal Interface Processor

Connect

Connectivity without limits

Acoustic reproduction begins with traditional sources such as radio, then Compact Disc and now moving on to the use of new devices like MP3 players, streaming mobile phones and other multimedia devices.
The bit processors provide the ability to take advantage of these technologies by bringing them all together, making the most of the musical performance.
Input channels for different signal typologies, along with analog and digital output channels ensure vast expandability of any audio system.

Customize

Listening Freedom

The **bit** project was born with the aim of creating a perfect acoustical environment in every vehicle, customizable for every listening position, letting you experience true mobile bliss.
Today's new vehicles are equipped with audio systems which offer very little, if any, upgrade opportunities. The most technologically advanced factory systems feature proprietary functions that are in most cases essential to the vehicle operation, but their sound is generally unsatisfactory.
The bit processors are designed and developed to control every parameter of the reproduction, providing the ability to regenerate and customize the system's sound to reproduce even the finest details.
The concept of complete listening freedom becomes real.

Control

The digital domain

The unlimited calculation capability of the **bit** processors DSP (Digital Signal Processor) is combined with an extremely user-friendly interface. Specifically designed for audio applications, the DSP processes the signal in the digital domain: **the management and control of the acoustic reproduction are further improved by the accuracy and configurability of the digital system.**

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bit Ten
Signal Interface Processor

bit Ten & bit Ten D - Technology

Signal processing

bit Ten features a 32 bit, 147 MHz clock speed Cirrus Logic DSP. It is a special DSP, ensuring high integration, where the main processing functions are implemented in optimized and pre-configured blocks, providing the ability to reduce the processing resources, ensuring top level performance. The architecture is completed with 24 bit A/D and D/A converters as well as a powerful microcontroller to manage, supervise and connect the system to the PC.

The audio signal follows a complex path, controlled by software managing the **bit Ten**.
Following the conversion from analog to digital, or otherwise starting in the digital domain using one of the S/PDIF digital inputs, the **bit Ten** provides the ability to:

1. automatically reconstruct a linear full-bandwidth stereo signal;
2. de-equalize the frequency response, to “correct” any possible equalization present in the OEM sources. This operation can be initiated through a simple push button switch found on the device, negating the need for a PC connection;
3. provide a 31 band equalizer to contour the input frequency response;
4. reconstruct the signal, in the case that the system requires a centre channel or subwoofer when the corresponding signals are not available as input channels

The user can configure the output mode of each channel relative to the installed system, and for each channel can:

1. be activated, de-activated or phase inverted;
2. be filtered with a Linkwitz or Butterworth crossover alignment, with adjustable slopes (6- 24 dB/Oct.), with 20 to 20,000 Hz cut-off frequencies, in Full-range, Hi-Pass, Lo-Pass and separately configurable slopes and frequencies on each side of a Band-Pass filter;
3. be contoured with 31 bands of 1/3 octave equalization, within a 20-20000 Hz , +/- 12 dB range with 128 step resolution;
4. be acoustically time aligned with the other channels with up to 15 milliseconds delay, in 0.02 ms steps, corresponding to a 510 cm virtual “movement” of the loudspeaker. The user can adjust the initial delay settings by following a guided on-screen procedure for a consistent reconstruction of the sound stage. A manual adjustment function is available for “fine tuning” of the delay;
5. adjust its output level to further tune the system’s overall response.

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bit Ten

Signal Interface Processor

Software

For total control of the system parameters, a software to be installed on the PC is provided. Developed according to specific criteria required by the Car Audio industry, it facilitates direct access to the innumerable signal treatment functions available; providing immediate results, as well as extreme operational accuracy.
Setting the parameters of each input single channel, setting the delays according to the listening position, adjusting crossovers and equalizers for each output channel; all of these operations can be managed by the PC.
The Windows-based (XP, Vista and 7) software can be used in Standard of Expert modes. The Standard mode guarantees straightforward and simplified system management achieving great results with little effort: a guided set-up procedure, according to the parameters assigned to the outputs, assists the user in setting up the crossovers and equalization enabling the tuning of any system in just a few “clicks”.
With the Expert mode, the software provides the ability to freely access all the parameters for a "fully-custom" tuning experience.
The software features a Context-sensitive Help, that the user can activate, opening in a dynamic help window displaying detailed description of its main functions.
In addition to that, it can manage multilingual context: the user can select the language and the change will be applied to the drop-down menus as well as the Context Help messages. The number of available languages will increase: once updates are available, they will be downloadable from the Audison website.

System Upgrade

The **bit Ten** boasts a modern and flexible platform, making it possible to stay current with technological evolution: the firmware, based upon Flash memory, can be updated at any time without having to disassemble the device from the system.
The software enables the user to check on available on-line updates *(http://update.audison.eu)* guiding the user through all of the upgrade phases. In addition to that, the user can manually force the update and proceed with a safe installation which can be retrieved even in case the update fails due to external accidental causes.

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bit Ten
Signal Interface Processor

bit Ten - Architecture

Innovative Design

bit Ten inherits from bit one a **minimal and compact design.**
Like with the bit one, the perfection of the design and proportions of the new processor equal the flawless layout of its internal technology, easing the installation.
The DRC provides direct interface between the user and the device. Through an ergonomic knob, adjustments can be made rapidly and accurately. A liquid crystal back-lit display provides visual elements to the user. The compact size and the dark grey aluminium finish allow the DRC to seamlessly integrate into any dash layout; adding a touch of originality and technology.

Universal inputs

bit Ten provides 7 signal inputs with different connection typologies: four high-level inputs, also accepting low-level pre-amplified signals; a stereo auxiliary input; a standard Remote IN and a high-level (PHONE IN) “momentary audio interrupt” input for use with devices such as cellular phone hands-free kits that provide a "Mute" function.
The **bit Ten D** version also features an optical digital input, selectable from the DRC, minimizing interference and degradations of the signal found in traditional analog interconnects, also by-passing the A/D conversion phases of analog signals.
Thanks to the on-screen instructions provided by the software during the set-up, **bit Ten** can automatically sum multiple filtered channels (for instance, woofer plus tweeter) and then “flatten” the equalized response curve of the OEM source. It can also reconstruct a centre, rear and/or subwoofer outputs with a simple stereo input. By reading the appropriate track on the provided test disc (CD), the DSP reconstructs a full-bandwidth signal, rectifying its frequency response, providing a “full bandwidth” signal ready for further processing.

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bit Ten

Signal Interface Processor

Outputs

bit Ten provides 5 PRE OUT analog outputs. Each output channel features a 31 band equalizer, a 66 step electronic crossover with selectable Linkwitz-Riley or Butterworth alignment with selectable 6 - 24 dB adjustable slopes and digital time delay functions.
Through the AD Link connector, **bit Ten D** provides the ability to increase the number of outputs channels to 8, all in a digital format. With the use of a CAT 5.S cable terminated with a shielded RJ45 connector (as used with LAN connections), the digital signal is transmitted to amplifiers equipped with this feature (such as found on the Audison Thesis TH series and/or the new Audison Voce amplifiers, coming soon).
It is possible to use the two different output typologies (analog and digital) simultaneously for a maximum of 8 outputs total, as the software provides the ability to direct the audio signal to each output channel independently.
AC Link is dedicated to the “remote control” of the system. The system is comprised of one connector for the provided DRC (Digital Remote Control) and one for the amplifiers present in the system. By connecting the AC Link output to the amplifiers, it is possible to control the volume of all 8 channels directly at the amplifier.

DRC – Digital Remote Control

Digital Remote Control permits the control of the main system without the use of a PC.
Installed in an ergonomic position within the dashboard of the car, the user can: choose between two “tuning” configurations pre-sets created and saved using the **bit Ten** software; select the source from the master, auxiliary and optical digital inputs (the digital input only with the **bit Ten D**, which comes packaged with the DRC); adjust main system functions (volume, balance, fader and subwoofer volume); identify the proper position of the sources output level set while tuning the **bit Ten** as well as adjust the display brightness for ledgeability and to reduce glare during night driving.

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bit Ten D

Signal Interface Processor

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Power Supply

Voltage:	11 ÷ 15 VDC
Idling current:	0.4 A
Switched off without DRC:	< 2.5 mA
Switched off with DRC:	< 4.0 mA
Remote IN voltage:	7 ÷ 15 VDC (1.3 mA)
Remote OUT voltage:	12 VDC (130 mA)
Distorsion-THD@1 kHz,1 VRMS Output:	0.005%
Bandwidth@ -3 dB:	10 ÷ 22k Hz
S/N Ratio @ A weighted:	96 dBA
Channel Separation (@1 kHz):	85 dB
Input sensitivity (Low Level):	0.6 ÷ 5 VRMS
Input sensitivity (High Level):	2.0 ÷ 15 VRMS
Max Output Levels:	4 VRMS
Input impedance (AUX):	15 kΩ
Input impedance (High Level):	2.2 kΩ
Inputs:	Low Level (Pre In): AUX L/R High Level (Spk In): FL-FR-RL-RR, Phone IN Optical: S/PDIF Max 48 kHz / 24 bit / PCM
Outputs:	Analog Pre Out: Ch1÷Ch5 Digital Out: 48 kHz - 24 bit; AD Link: Ch1÷Ch8

Crossover

Type:	12 / 24 dB Linkwitz 6 / 12 / 18 / 24 dB Butterworth
Mode:	Full / HiPass/LowPass/BandPass (indipendent)

Equalizer

Type:	31 Band, ISO 1/3 Oct, 20 Hz ÷ 20 kHz
Gain:	± 12 dB
Delay:	0 ÷ 22 ms (748 cm/294.5 inch)

Time Alignment

Distance:	0 ÷ 510 cm / 200.8 inch
Delay:	0 ÷ 15 ms
Step:	0.08 ms; 2.8 cm / 1.1 inch
Fine set step:	0.02 ms; 0.7 cm / 0.27 inch

Size

WxHxD (mm/inches):	191 x 34 x 131 7.51" x 133" x 4.76"
Weight (kg/lb):	0.6 / 1.322

Audio DSP and converters	32 bit Cirrus Logic (Clock speed: 147 MHz) Digital Signal Processing chip and A/D D/A converters working in PCM at 48 kHz with 24 bit resolution. The processor speed allows the user to hear and verify in real time the changes applied during the tuning
Audio Inputs	4 independent high-level channels with automatic summing capability 1 analog low-level stereo auxiliary input 1 optical digital input 1 high-level momentary audio interrupt input (with priority) on Phone Mute cable (settable through PC)
Audio Outputs	5 independent analog PRE channels featuring adjustable level 1 AD Link output featuring 8 independent digital audio channels through a single CAT 5.S LAN cable for use with amplifiers featuring AD Link input
Control Connections	1 USB /B (2.0) connector for PC connection 1 AC Link control bus connector for DRC 1 AC Link control bus for use with amplifiers featuring AC Link 1 input for external Mute (settable through PC)
Configuration	Guided procedure that, thanks to a wide range of set names, provides the ability to assign each component to the bit Ten D connections and automatically coordinate their functions
Turn-on Controls	ART™, Automatic Remote Turn on/off, selectable from Hi-Level Front L. The ART™ can be enabled through an external switch. Through the Remote IN Through vehicle ignition key trigger with memory function Through the DRC Automatically through the hands-free phone kit momentary interrupt
In/Out Volume	Manual input sensitivity adjustment for the Master Hi-Level inputs (with supplied Test CD) Manual input sensitivity adjustment for auxiliary inputs Independent level control for each output channel for system fine tuning (-40 ÷ 0 dB)
De-equalization	Automatic de-equalization of signal fed into the high-level inputs (with supplied Test CD) if necessary. It can also be performed without the PC
Equalizers	31-band graphic equalizer (1/3 Oct.; ±12dB) for each analog and digital output channel
Crossover Filter	Filter typology: Hi-pass, Lo-pass, Full Range or Band-pass with independent selectable cut-off slope Cut-off frequency: 70 steps available from 20 Hz to 20 kHz Cut-off slope: 6 to 24 dB/Oct. Filter alignment: Linkwitz or Butterworth Mute function: selectable for each output (on/off) Phase: selectable for each output (0°/180°)
Signal channels reconstruction	It can reconstruct a stereo output signal from a multi-channel input signal. In addition it can reconstruct rear, centre and subwoofer output channels from a stereo input
Time Alignment	Guided procedure for the speaker distance data entry with an automated calculation (distance to time) for each channel for accurate delay times. System also provides for manual fine tuning of delay (0.02 ms fine set)
DRC	Master Volume, Subwoofer Volume, Balance and Fader controls, Input selection, Memory selection, Adjustable display brightness. Access to digital features of amplifiers featuring AC Link
Memory	2 presets separately managed and recalled with the DRC
bit Ten D software	Microsoft Windows (XP, Vista and 7) based software with "Standard" and "Expert" operating modes; screen resolution: 1024 x 600 px min.

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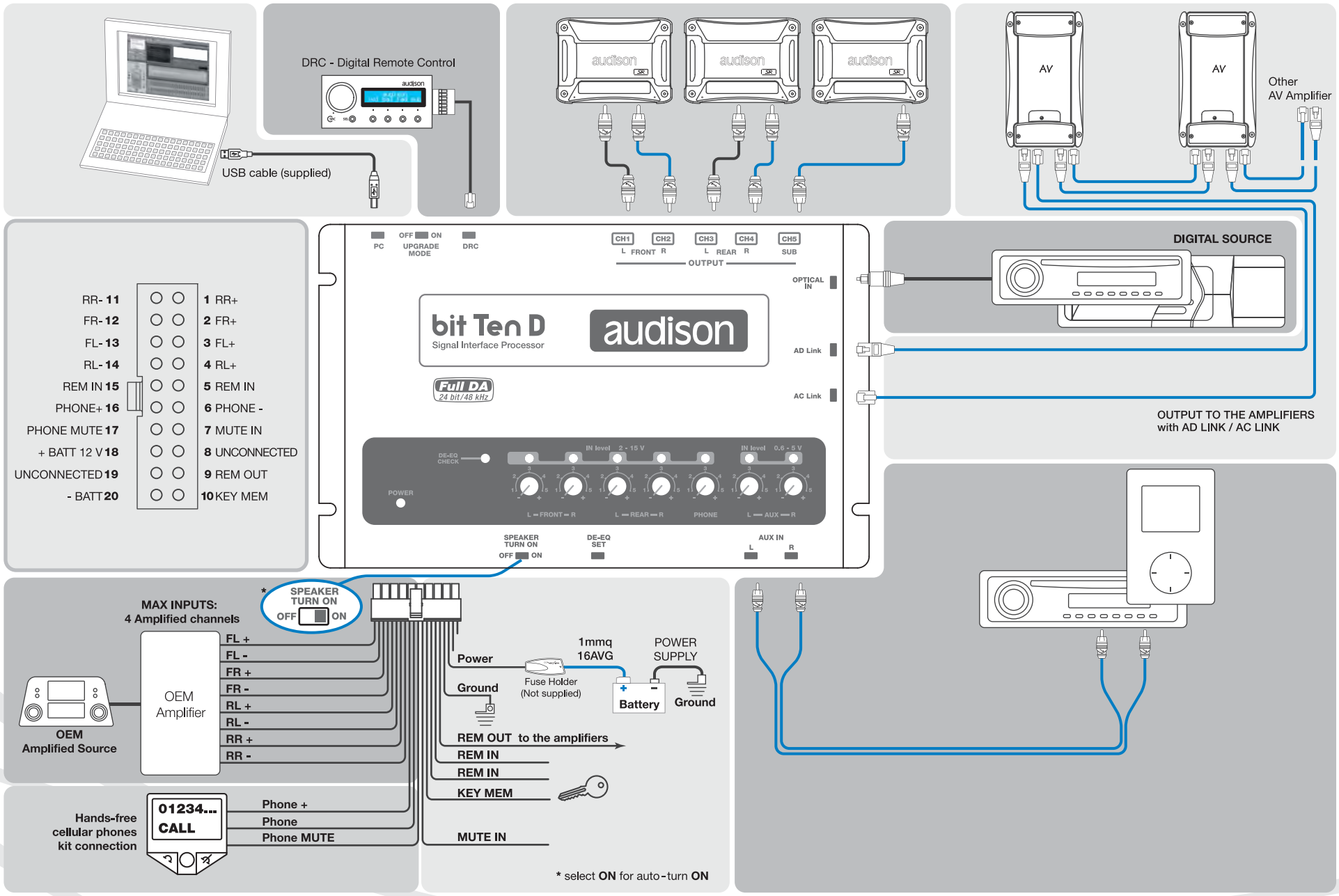
DRC - Digital Remote Control
USB cable (supplied)
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AV
AV
Other
AV Amplifier
RR- 11
FR- 12
FL- 13
RL- 14
REM IN 15
PHONE+ 16
PHONE MUTE 17
+ BATT 12 V 18
UNCONNECTED 19
- BATT 20
1 RR+
2 FR+
3 FL+
4 RL+
5 REM IN
6 PHONE -
7 MUTE IN
8 UNCONNECTED
9 REM OUT
10 KEY MEM
PC
OFF ON
UPGRADE MODE
DRC
CH1
CH2
CH3
CH4
CH5
L FRONT R
L REAR R
SUB
OUTPUT
OPTICAL IN
bit Ten D
Signal Interface Processor
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AD Link
Full DA
24 bit/48 kHz
AC Link
DIGITAL SOURCE
OUTPUT TO THE AMPLIFIERS
with AD LINK / AC LINK
DE-EQ CHECK
IN level 2 - 15 V
IN level 0.6 - 5 V
POWER
L — FRONT — R
L — REAR — R
PHONE
L — AUX — R
SPEAKER TURN ON
OFF ON
DE-EQ SET
AUX IN
L
R
MAX INPUTS:
4 Amplified channels
*
SPEAKER TURN ON
OFF ON
FL +
FL -
FR +
FR -
RL +
RL -
RR +
RR -
OEM Amplified Source
OEM Amplifier
Power
Ground
1mmq 16AVG
Fuse Holder (Not supplied)
POWER SUPPLY
Battery
Ground
REM OUT to the amplifiers
REM IN
REM IN
KEY MEM
MUTE IN
Hands-free cellular phones kit connection
01234...
CALL
Phone +
Phone
Phone MUTE
* select ON for auto-turn ON

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Power Supply

Voltage:	11 ÷ 15 VDC
Idling current:	0.4 A
Switched off without DRC:	< 2.5 mA
Switched off with DRC:	< 4.0 mA
Remote IN voltage:	7 ÷ 15 VDC (1.3 mA)
Remote OUT voltage:	12 VDC (130 mA)

Distorsion-THD@1 kHz,1 VRMS Output:	0.005%
Bandwidth@ -3 dB:	10 ÷ 22k Hz
S/N Ratio @ A weighted:	96 dBA
Channel Separation (@1 kHz):	85 dB
Input sensitivity (Low Level):	0.6 ÷ 5 VRMS
Input sensitivity (High Level):	2.0 ÷ 15 VRMS
Max Output Levels:	4 VRMS
Input impedance (AUX):	15 kΩ
Input impedance (High Level):	2.2 kΩ

Inputs:	Low Level (Pre In): AUX L/R High Level (Spk In): FL-FR-RL-RR, Phone IN
Outputs:	Analog Pre Out: Ch1÷Ch5

Crossover

Type:	12/24 dB Linkwitz 6/12/18/24 dB Butterworth
Mode:	Full / HiPass/LowPass/BandPass (indipendent)

Equalizer

Type:	31 Band, ISO 1/3 Oct, 20 Hz ÷ 20 kHz
Gain:	± 12 dB
Delay:	0 ÷ 22 ms (748 cm/294.5 inch)

Time Alignment

Distance:	0 ÷ 510 cm / 200.8 inch
Delay:	0 ÷ 15 ms
Step:	0.08 ms; 2.8 cm / 1.1 inch
Fine set step:	0.02 ms; 0.7 cm / 0.27 inch

Size

WxHxD (mm/inches):	191 x 34 x 131 7.51" x 133" x 4.76"
Weight (kg/lb):	0.6 / 1.322

Audio DSP and converters	32 bit Cirrus Logic (Clock speed: 147 MHz) Digital Signal Processing chip and A/D D/A converters working in PCM at 48 kHz with 24 bit resolution. The processor speed allows the user to hear and verify in real time the changes applied during the tuning
Audio Inputs	4 independent high-level channels with automatic summing capability 1 analog low-level stereo auxiliary input 1 high-level momentary audio interrupt input (with priority) on Phone Mute cable (settable through PC)
Audio Outputs	5 independent analog PRE channels featuring adjustable level
Control Connections	1 USB /B (2.0) connector for PC connection 1 AC Link control bus connectors for DRC 1 input for external Mute (settable through PC)
Configuration	Guided procedure that, thanks to a wide range of set names, provides the ability to assign each component to the bit Ten connections and automatically coordinate their functioning
Turn-on Controls	ART™, Automatic Remote Turn on/off, selectable from Hi-Level Front L. The ART™ can be enabled through an external switch Through the Remote IN Through the car ignition key with memory function Through the DRC (optional) Automatically through the hands-free phone kit
In/Out Volume	Input sensitivity manual adjustable for the Master Hi-Level inputs (with supplied Test CD) Manual input sensitivity adjustment for auxiliary inputs Independent level control for each output channel for system fine tuning (-40 ÷ 0 dB)
De-equalization	Automatic de-equalization of signal fed into the high-level inputs (with supplied Test CD) if necessary. It can also be performed without the PC
Equalizers	31-band graphic equalizer (1/3 Oct.; ±12 dB) for each output channels
Crossover Filter	Filter typology: selectable; Hi-pass, Lo-pass, Full Range, Band pass with independent selectable cut-off slope Cut-off frequency: 70 steps available from 20 Hz to 20k Hz Cut-off slope: selectable; 6 to 24 dB/Oct. Selectable alignment: Linkwitz or Butterworth Mute: selectable for each output (On/Off) Phase: selectable for each output (0°/180°)
Signal channels reconstruction	It can reconstruct a stereo output signal from a multi-channel input signal. In addition it can reconstruct rear, centre and subwoofer output channels from a stereo input
Time Alignment	Guided procedure for the speaker distance data entry with an automated calculation (distance to time) for each channel for accurate delay times. System also provides for manual fine tuning of delay (0.02 ms fine set)
DRC (optional)	Master Volume, Subwoofer Volume, Balance and Fader controls, Input selection, Memory selection, Adjustable display brightness
Memory	2 presets separately managed and recalled by the DRC (optional)
bit Ten software	Microsoft Windows (XP, 7 and Vista) based software with "Standard" and "Expert" operating modes; screen resolution: 1024 x 600 px min.

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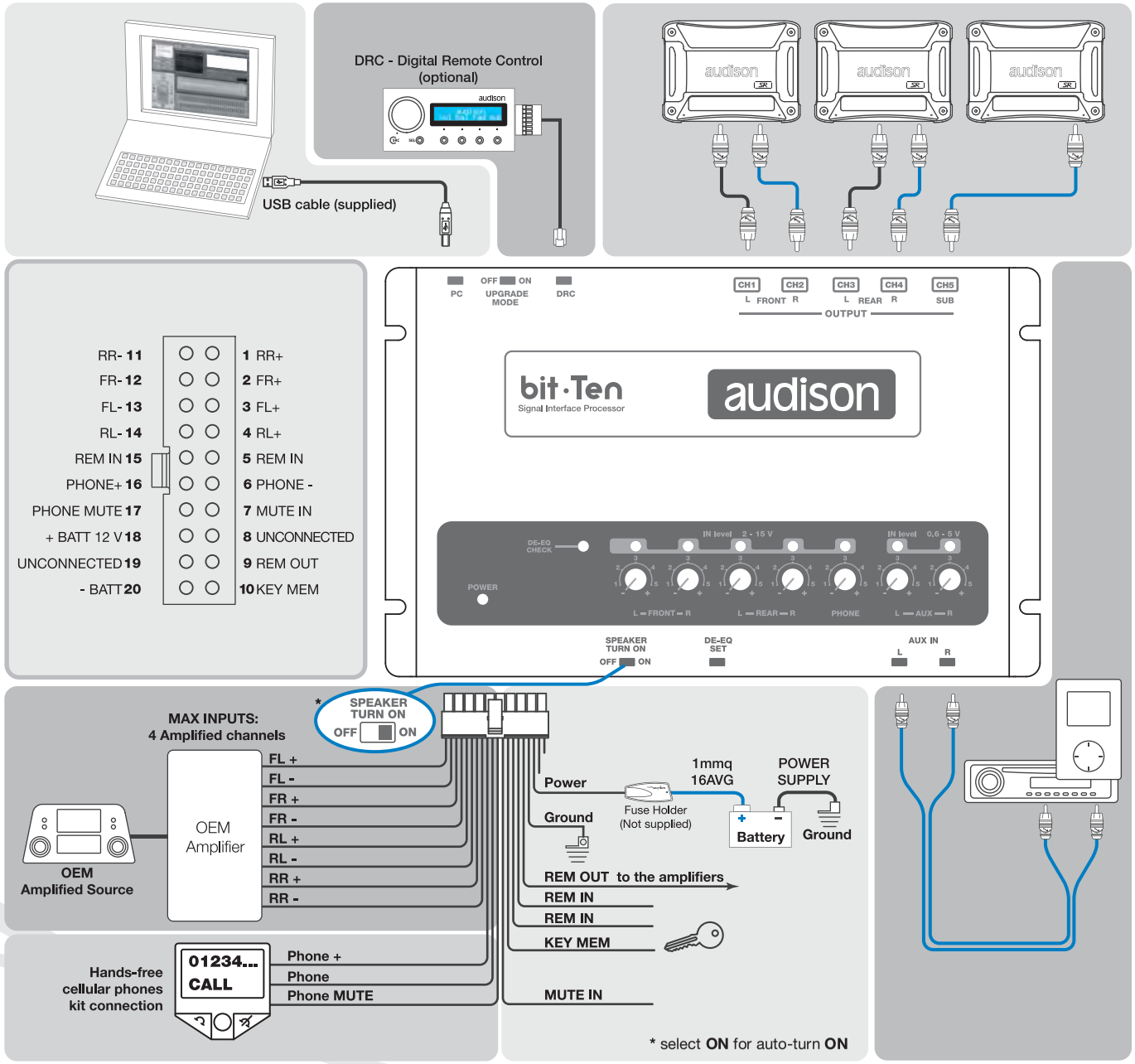
USB cable (supplied)
DRC - Digital Remote Control (optional)
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RR- 11
FR- 12
FL- 13
RL- 14
REM IN 15
PHONE+ 16
PHONE MUTE 17
+ BATT 12 V 18
UNCONNECTED 19
- BATT 20
1 RR+
2 FR+
3 FL+
4 RL+
5 REM IN
6 PHONE -
7 MUTE IN
8 UNCONNECTED
9 REM OUT
10 KEY MEM
PC
OFF ON
UPGRADE MODE
DRC
CH1 CH2 CH3 CH4 CH5
L FRONT R
L REAR R
SUB
OUTPUT
bit·Ten
Signal Interface Processor
audison
DE-EQ CHECK
IN level 2 - 15 V
IN level 0,6 - 5 V
POWER
L — FRONT — R
L — REAR — R
PHONE
L — AUX — R
SPEAKER TURN ON
OFF ON
DE-EQ SET
AUX IN
L
R
MAX INPUTS:
4 Amplified channels
*
SPEAKER TURN ON
OFF ON
FL +
FL -
FR +
FR -
RL +
RL -
RR +
RR -
OEM Amplifier
OEM Amplified Source
Power
Ground
1mmq 16AVG
Fuse Holder (Not supplied)
POWER SUPPLY
Battery
Ground
REM OUT to the amplifiers
REM IN
REM IN
KEY MEM
MUTE IN
Hands-free cellular phones kit connection
01234...
CALL
Phone +
Phone
Phone MUTE
* select ON for auto-turn ON

bit one

Signal Interface Processor

Bit One .1 Version

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Power Supply

Voltage:	11 ÷ 15 VDC
Idling current:	0.45 A
Switched off without DRC:	< 0.5 mA
Switched off with DRC:	< 1.8 mA

Remote IN voltage:	7 ÷ 15 VDC (1.3 mA)
Remote OUT voltage:	12 VDC (130 mA)

Distortion - THD @ 1 kHz, 1 V RMS Output:	0.002%
Bandwidth:	4.5 ÷ 21 kHz
S/N Ratio @ A weighted:	102 dBA
Channel Separation (@1 kHz):	77 dB
Input sensitivity (Low Level):	0.3 ÷ 5 V RMS
Input sensitivity (High Level):	1.2 ÷ 20 V RMS
Max Output Levels:	4 V RMS
Input impedance (Low Level):	20 kΩ
Input impedance (High Level):	5 kΩ

Inputs:	Low Level (Pre In): Ch1÷Ch6, AUX1 L/R, AUX2 L/R High Level (Speakers In): Ch1÷ Ch8, Phone In Coaxial and Optical (S/PDIF Max 48 kHz/24 bit, PCM)
Outputs:	Analog Pre Out: Ch1÷Ch8 Digital Out 48kHz-24 bit AD Link: Ch1÷ Ch8

Crossover

Type:	12/24/36/48 dB Linkwitz 6/12/18/24/30/36/42/48 dB Butterworth
Mode:	Full / Hi Pass / Low Pass / Band Pass

Equalizer

Type:	31 Band, ISO 1/3 Oct, 20 Hz ÷ 20 kHz
Gain:	± 12 dB

Time Alignment

Delay:	0 ÷ 22 ms in 0,02 ms steps (748 cm/294.5 inch)

Size

WxHxD (mm/inches):	225 x 32,3 x 150 8.85" x 1.27" x 5.90"
Weight (kg/lb):	1,345 / 2.965

Audio DSP and converters	32-BIT floating point Analog Devices Sharc (Clock speed: 266MHz) Digital Signal Processing chip and Wolfson A/D D/A converters working in PCM at 48kHz with 24 Bit resolution. Tuning functions can be heard in real time due to processing speed
Audio Inputs	8 independent high-level channels (with automatic summing capability) or 6 independent analog low-level channels 2 analog low-level stereo auxiliary inputs 1 optical digital input 1 electric coaxial digital input 1 high-level momentary audio interrupt input (with Mute IN) for use with mobile phone or navigation systems
Audio Outputs	8 independent low-level analog channels featuring adjustable level and 1 AD Link output (8 independent digital audio channels through a single CAT 5.S LAN cable for use with AD Link provided amplifiers)
Digital Control System	1 USB /B (2.0) connector for PC connection 2 AC Link control bus connectors for DRC and AC Link amplifiers
Configuration	Guided procedure that, thanks to a wide range of set names, provides the ability to assign each component to the Bit One connections and automatically coordinate their functioning
Turn-on Controls	ART™ automatic remote turn on/off circuit. Through the car ignition key with memory function. Through the DRC. Automatically through the hands-free phone kit.
In/Out Volume	Input sensitivity automatically adjusted for the main inputs (with supplied Test CD and DVD) Manual input sensitivity adjustment for auxiliary inputs Independent level control for each output channel for system fine tuning (-40 ÷ 0 dB)
Dynamic Equalizer	System automatically self-adjusts through an equalization between low and high listening levels that can be set by the user and controlled by the DRC
De-equalization and calibration	Automatic de-equalization of signal fed into the high-level inputs (with supplied Test CD or DVD) and levels calibration
Equalizers	One 31-band graphic equalizer (1/3Oct.; ±12dB) for each one of the 4 auxiliary input One 31-band graphic equalizer (1/3 Oct.; ±12dB) for each one of the 8 output channels
Crossover Filter	Filter typology: Selectable; Hi-pass, Lo-pass, Bandpass, Full Range Cut-off frequency: 70 steps available from 10Hz to 20kHz Cut-off slope: Selectable; 6 to 48 dB/Oct. Alignments: Selectable; Linkwitz or Butterworth Mute: Selectable for each output (On/Off) Phase: Selectable for each output (0°/180°)
Signal channels reconstruction	It can reconstruct a stereo signal from a multi-channel signal. In addition it can reconstruct a centre channel and subwoofer channels from a stereo input alone
Time Alignment	Guided procedure for the speaker distance data entry with an automated calculation of proper delay times for each channel for accurate time alignment set-up. System also provides for manual fine tuning of delay (0÷22 ms max)
Auto Restart	Automatic turn Off/On, if the DSP locks up
DRC	Master Volume control, Subwoofer Volume control, Balance control, Fader control, Input selection, Memory selection, Dynamic Equalizer On/Off, Adjustable display brightness, Access to digital features of Audison TH amps if connected
Memory	4 presets separately managed and recalled by the DRC Remote Control
Bit One software	Microsoft Windows (Win 2000, XP, Vista) based software with "Standard" and "Expert" operating modes; screen resolution: 1024 x 600 px min.

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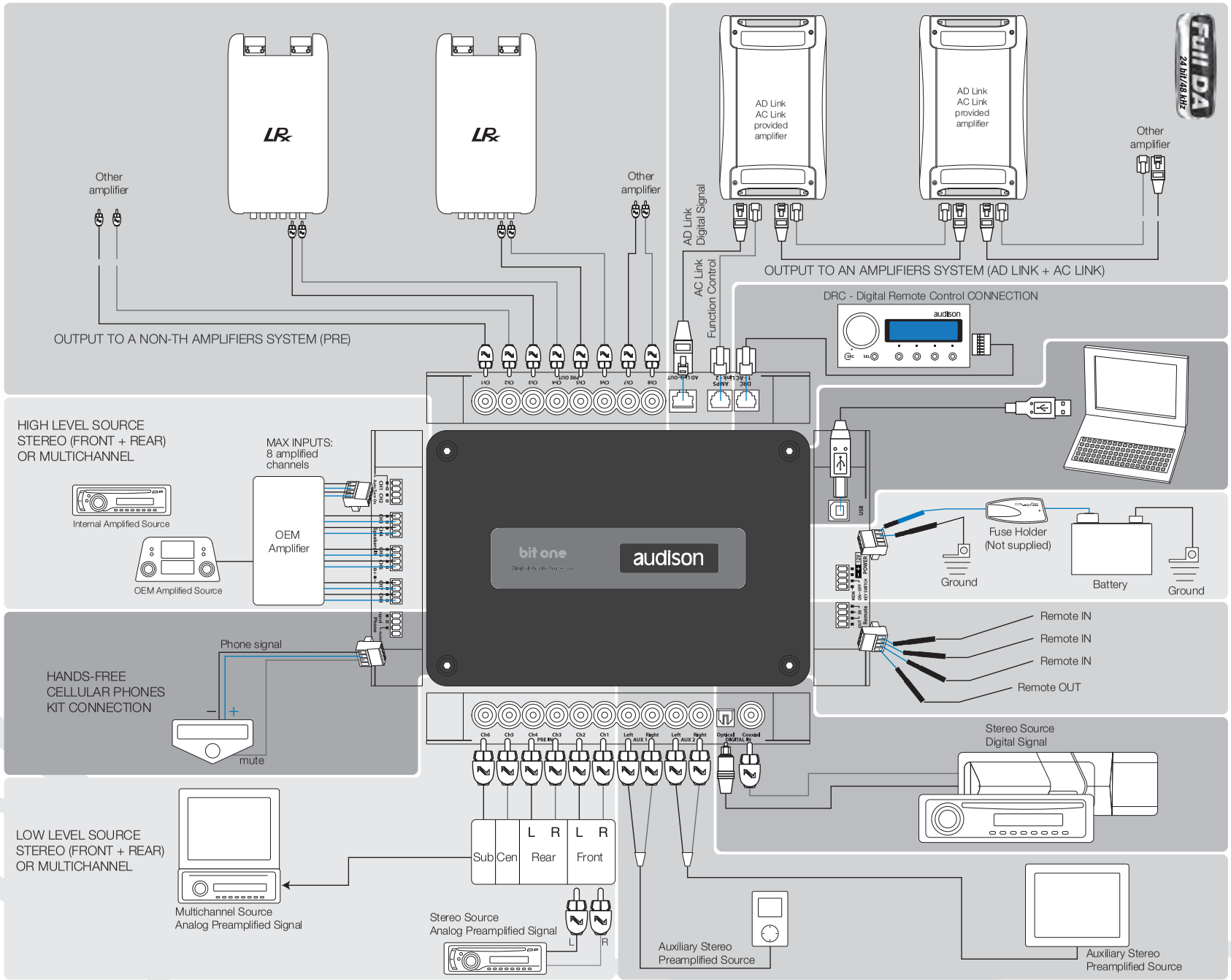
Other amplifier
Other amplifier
Other amplifier
AD Link Digital Signal
AC Link Function Control
AD Link AC Link provided amplifier
AD Link AC Link provided amplifier
Other amplifier
OUTPUT TO AN AMPLIFIERS SYSTEM (AD LINK + AC LINK)
OUTPUT TO A NON-TH AMPLIFIERS SYSTEM (PRE)
DRC - Digital Remote Control CONNECTION
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HIGH LEVEL SOURCE
STEREO (FRONT + REAR)
OR MULTICHANNEL
MAX INPUTS:
8 amplified
channels
Internal Amplified Source
OEM Amplifier
OEM Amplified Source
bit one
audison
Fuse Holder
(Not supplied)
Ground
Battery
Ground
Remote IN
Remote IN
Remote IN
Remote OUT
HANDS-FREE
CELLULAR PHONES
KIT CONNECTION
Phone signal
mute
Stereo Source
Digital Signal
LOW LEVEL SOURCE
STEREO (FRONT + REAR)
OR MULTICHANNEL
Sub
Cen
L R
Rear
L R
Front
Multichannel Source
Analog Preamplified Signal
Stereo Source
Analog Preamplified Signal
L
R
Auxiliary Stereo
Preamplified Source
Auxiliary Stereo
Preamplified Source

bit Accessories

ideato,
progettato,
costruito
in Italia

For bit one, bit Ten D, bit Ten

ECK DRC
DRC Cable Extension kit
It is a kit composed of a cable and an adapter allowing a 2 m/78,74" additional extension of the cable supplied with the DRC.
This extension is required for installations on especially long vehicles such as SUV's. Total length of the supplied cable with the extension is equal to 6,5 m/225,90''.

PACKAGE: Polybag Qty. 1

For bit one, bit Ten D

Optical digital audio signal cable, designed for car audio applications, permitting the transfer of the optical signal along its 10 m/393,70'' length without signal loss. An especially thicker sheath protects the optical fibre to prevent the cable from damages if it is pressed against sharp edges. The metal connector protects the optical fibre for its full length, ensuring a stable transmission of the signal also in the event of strong vibrations.

OP 1.5 • TOSLINK Optical Cable 1,5m / 59,05"
Optical cable ending with Toslink connectors for S/PDIF digital audio signals.
Cable length 1,5 m/59,05"

PACKAGE: Polybag Qty. 1

OP 4.5 • TOSLINK Optical Cable 4,5m / 177,16"
Optical cable ending with Toslink connectors for S/PDIF digital audio signals.
Cable length 4,5 m/177,16"

PACKAGE: Polybag Qty. 1

STA • F/F Socket Toslink adapter
Optical adapter to extend optical cables featuring Toslink connectors.

PACKAGE: Polybag Qty. 1

For bit Ten D, bit Ten

RCA Multipole Connector
Essential connector making link fast and effortless. It expedites connections between low-level (PRE IN) inputs of the head unit (min. 2 volts) and PRE OUT inputs of the bit Ten.

PACKAGE: Polybag Qty. 1

audison

bit Ten
Signal Interface Processor

Glossary

bit Ten / bit Ten D: Digital signal processor used to elevate the acoustic performance of any Car Audio system.

AC Link: Audison Control Link, a communication bus for the interconnection and control of more than one device.

AD Link: Audison Digital Audio Link, eight channel digital audio bus.

DRC: Digital Remote Control, interface between the bit Ten and the user to choose the set-up memory, select the inputs, adjust the volume, balance, fader and subwoofer level as well as the display brightness

DSP: Digital Signal Processor, a special microprocessor, featuring a specific internal structure, destined for the continuous processing of data streaming.

32 bit: The term “32 bit” represents the number of significant digits used in a sample representation. The “32 bit” format is employed in high-performance DSPs. Other formats used to save digital format signals: 16 bit (CD), 24 bit (DVD, Blu-ray).

44,1 ÷ 192kHz: Sampling frequency of S/PDIF digital signal. 44,1kHz: CD; 48,0kHz: DAT; 96kHz: DVD; 192kHz: DVD and Blu-ray.

PCM: Pulse Code Modulation, digital representation of an analog signal, with the total lack of compression, thus the complete representation of the sound information.

MP3: Compressed digital audio signal. Compared to the PCM format, it remarkably reduces the memory occupation with consequent sound quality deterioration.

S/PDIF: Standard used for the digital audio transmission over coaxial cable or optic fibre.

TOSLINK: Fibre Optical cable connection for S/PDIF signals.

audison

About us

Elettromedia, an Italian company, is a leader within the world-wide car Hi-Fi market.
Born in 1987 in Potenza Picena by a group of friends who shared the same passion for in-car high fidelity, throughout the past years Elettromedia has been walking the path of excellence: its products are distributed in more than 50 countries; the company has received many awards and acknowledgements from the most authoritative leaders within the car audio industry; it also can boast reviews of more than 2000 pages published in 30 different languages (visit: www.elettromedia.it/press_area.asp).
The Elettromedia brands are Audison, Hertz, Connection and AZaudiocomp. Through a co-branding strategy, the company offers all of the components required for a complete, top-level car audio system.

elettromedia

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Awards

EISA AWARDS — Mobile Electronics Loudspeaker 2002-2003 — Hertz Space 6K 25
EISA AWARDS — Mobile Amplifier 2003-2004 — Audison SRx 3
EISA AWARDS — Mobile Amplifier 2004-2005 — Audison Thesis HV Venti
EISA Award — Best Product 2006-2007 — Mobile Amplifier — Audison LRx 6.9
EISA Award — Best Product 2007-2008 — In-Car Subwoofer — Hertz ML 2500
EISA Award — Best Product 2008-2009 — In-Car Amplifier — Audison Thesis TH due
EISA Award — Best Product 2008-2009 — In-Car Speaker System — Audison Thesis TH K3 orchestra
EISA Award — Best Product 2009-2010 — In-Car Integration — Audison bit one
EISA Award — Best Product 2010-2011 — In-Car Speaker System — Audison Voce AV K6
Design & Engineering Showcase Honors — Innovations International CES 2005
Design & Engineering Showcase Honors — Innovations International CES 2006
Design & Engineering Showcase Honors — Innovations International CES 2007
Design & Engineering Showcase Honors — Innovations International CES 2009
The Product of Year
Auto Sound Grand Prix 2006 — Golden Award
Auto Sound Grand Prix 2008 — Winner
Best of car audio 2007

audison

bit Ten
Signal Interface Processor

Press Kit to Download

bit ten, bit ten D, bit one Press Information (PDF version, 150dpi resolution)

Logos: Audison, Full DA, bit Ten, bit Ten D, Ideato progettato costruito in Italia (Adobe Illustrator version, 300dpi resolution)

Photos (JPEG version, 300dpi resolution)

bit one

bit Ten D

bit Ten

bit Ten_technologies

bit Ten_Accessories

Elettromedia_Headquarter

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Technology at the Art of Sound
Manufactured by elettromedia Italy

All Specifications Subject to Change Without Notice

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